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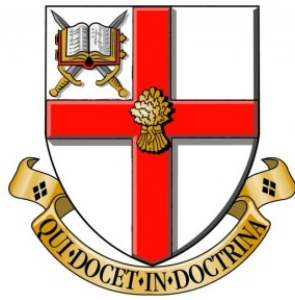
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Chester

WHAT BARRIERS ARE PERCEIVED TO BE PREVENTERS IN A
SERVICED BASED ORGANISATION REALISING BUSINESS
PROCESS MANAGEMENT?

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A dissertation submitted in part fulfilment of the requirements of the University
of Chester for the degree of Master of Business Administration

CHESTER BUSINESS SCHOOL

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Abstract

The focus of this research is to consider what key factors can reduce the effectiveness of Business Process Management (BPM) within a service based organisation, more specifically within Organisation X. In order to benefit from the potential advantages of BPM, Organisation X needs to identify the challenges which are perceived by internal stakeholders which may hinder BPM within the business environment. Using a case study approach, the Delphi method was employed as a way to identify and rank the perceived barriers within Organisation X. Twenty-five different barriers were identified, six of which were deemed to have the greatest impact on BPM within Organisation X. Leadership was identified as the greatest barrier followed by Communication, Value of processes, Accountability, Motivation and finally, Culture. Although the barriers identified from the findings are broad topics within business literature as a whole, they should be considered in the context of BPM as well as within the wider organisational context. It is suggested that Organisation X continues to migrate from a traditional, functional, siloed based environment to a process driven environment. The list of barriers identified within the research gives Organisation X a starting point in which to focus their initial efforts of introducing BPM. However, it is important to consider the interdependencies that exist between barriers and the context descriptions provided by the participants.

Declaration

This work is original and has not been submitted previously for any academic purpose. All secondary sources are acknowledged.

Signed: _____

Name: Victoria Joanne Artell

Date: 6th June 2013

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1. Introduction

1.1. Background to the Research

Organisation X is a service based company who specialise in the oil and gas industry.

The organisation has historically operated as functional units, which have developed a silo mentality within both its management and employees. However, due to the style of the current General Manager, the silo mentality is slowly being reduced in an aim to increase cross departmental cooperation resulting in a more complete service offering for customers.

Over the past twelve months, the organisation has undergone major change in its management structure, strategy and business objectives. As part of this change the organisation has taken the opportunity to review its current service offerings, in particular how the organisation produces those service products, in an aim to better understand the organisation's strengths and weaknesses.

Today, more than 75% of jobs are service based (Bryson and Daniels, 2007) with the increase in service industries and technological advancements, now means a physical item may not actually be produced (Davis, 2012). With Organisation X being a serviced based company, the Senior Management recognise that along with its Employees, the processes which are carried out in order to serve customers are valuable assets (Hansen, Nohria, and Tierney, 2000).

It is important that appropriate controls and measures of the processes are in place to ensure maximum efficiencies are realised in time, money and customer satisfaction. The approach being reviewed by the management is Business Process Management, also referred to hereafter as BPM.

BPM is a paradigm shift from traditional functional structures to a process orientated thinking (Doebeli, Fisher, Gapp and Sanzogni, 2011). In fact, Bandara, Indulska, Chong, and Sadiq (2007), go as far to state that BPM:

'... prescribes that the entire management of the organisation [including] strategy, goal setting ... and planning be based on its core processes'.

Despite this, BPM has grown in popularity of over recent years (DeToro and McCabe, 1997).

Ko, Lee and Lee (2009 p746) describe BPM as a *'theory in practice [discipline] which has many views, definitions and perspectives.'*

In order to realise the potential advantages of BPM, Organisation X need to identify the challenges which will face them (Fisher, 2004; Bandara, Indulska, Chong, and Sadiq, 2007).

1.2. Research Question

The focus of this research is to consider what key factors can reduce the effectiveness of BPM within a service based organisation, more specifically within Organisation X. It is only through identifying and ranking potential barriers can the Organisation prepare to move to a process driven business environment.

The research question posed therefore is:

What barriers are perceived to be preventers in a serviced based organisation realising business process management?

The aims of the research are:

- i. To understand contemporary literature on business process management and factors which can affect its success.
- ii. To identify the perceived barriers associated with Business Process Management within Organisation X.
- iii. Prioritise the barriers in order of greatest (to smallest) to identify the main factor(s) which may affect the realisation of business process management within Organisation X.

1.3. Justification for the Research

The theoretical justification for the research is to add to the academic knowledge which identifies which barriers have the greatest negative impact on

BPM. In addition, although the Delphi method has been employed in studies relating to BPM, there have been large scale studies which have spanned across multiple countries. This study looks to provide a single organisational perspective utilising the Delphi method. The research will employ a case study approach within one organisation, covering two office sites both of which are based in the United Kingdom.

Furthermore, there is practical justification for the research as the findings will provide guidance to Organisation X in regards to improving their knowledge of BPM, while identifying what improvements or requirements are needed in both the short and long term prior to implementing a BPM approach.

1.4. Methodology

The philosophy of the research will be aligned with an interpretivism approach. Interpretivism, considers reality is influenced by the values of society (Fisher, 2010). Thus the researcher's view will be socially constructed and subjective (Saunders, Lewis, and Thornhill, 2009). Interpretivism believes that our understanding of the world around us is through social processes which take place between people (Fisher, 2010) and the meaning which society gives those processes (Saunders, Lewis, and Thornhill, 2009).

The research strategy being employed is one which aligns with the research aims that are concerned with identifying and ranking barriers associated with BPM within Organisation X.

The research will be conducted through a qualitative case study approach as it will be based within a single organisation. An inductive approach is being utilised owing to the qualitative nature of the research question. The inductive approach will work in agreement with the chosen philosophy as it too assumes there is a close understanding of knowledge based on the context of the situation, and that understanding is gained through the meaning people attach to events (Saunders, Lewis and Thornhill, 2009).

The method of data capture will be through an adaptation of Schmidt, Lyytinen, Keil, and Cule's (2001) Delphi method. The Delphi method which is to be used within this research is further outlined in Chapter 3, section 3.4.

1.5. Outline of the Chapters

1.5.1. Introduction

This chapter presents an introduction to the background of the research with a full justification. The research question, along with the aims of the research is detailed followed by a synopsis of the methodology and justification of the selected philosophical and methodological approaches.

1.5.2. Literature Review

This chapter reviews contemporary literature to better understand BPM and related topics. The review commences by defining BPM and the environment which supports such an approach. Maturity models associated with BPM are also briefly outlined. Finally, critical success factors and barriers of BPM which have been identified within academic literature are discussed.

1.5.3. Methodology

This chapter defines and justifies the methodological and philosophical approach which will be undertaken to examine the research question outlined in Chapter 1. Benefits and limitations of appropriate research tools are described, and the procedures which the research involves will be outlined. This chapter also outlines methods rejected by the researcher. Lastly, ethical implications of the research are considered.

1.5.4. Findings

This chapter will discuss the findings of the research having applied the methodology outlined in Chapter 3. The results from each stage of the Delphi method are presented using appropriate tables, bar charts and radar diagrams where applicable, along with explanation and justification of the data outlined.

1.5.5. Analysis and Conclusions

The analysis of the findings within the context of contemporary literature, as discussed in Chapter 2 will be presented in this chapter. Relevant conclusions will be drawn and the limitations of the research will also be discussed.

1.5.6. Recommendations

Practical recommendations are presented within this chapter based upon the findings, analysis and conclusions of the research.

1.6. Definitions

1.6.1. Business Process

'Is an organised group of related activities that together create customer value. The focus in a process is not on individual units of work, which by themselves accomplish nothing for a customer, but rather on an entire group of activities that, when effectively brought together, create a result that customers value.' (Hammer, 2001, p 1).

1.6.2. Business Process Management

BPM as a *'structured'* (Zairi, 1997) *'process-driven'* (Bandara, Indulska, Chong, and Sadiq, 2007) *'holistic'* approach (vom Brocke and Sinnl, 2011) which *'integrates information technology with knowledge of business processes'* (van der Aalst, ter Hofstede and Weske, 2003; da Silva, Damian, and de Pádua, 2012) to enable analysis and continuous improvements to be made to business activities (Zairi, 1997) for the benefit of the end customer (Hammer and Champy, 1993; Davenport, 1993; Hammer, 2007).

1.6.3. Barrier

Within the context of this research, a barrier is deemed as anything which prevents, reduces or stops processes within the organisational environment.

1.6.4. Process Owner

An identified individual *'who has responsibility for the process and its results'* (Hammer, 2007, p3).

1.7. Summary

This chapter commenced with an introduction to the background of the research with a full justification. The research question, along with the aims of the research, were then detailed, followed by a synopsis of the methodology which

is to be employed to answer the research question. Justification of the selected philosophical and methodological approaches was also presented to the reader.

Finally, a short description of each of the following chapters was given to establish the structure of the dissertation.

The following chapter will review current academic literature concerning BPM and related topics.

2. Literature review

2.1. Introduction

The objective of this chapter is to satisfy the first aim of the research by understanding contemporary literature on BPM and identify associated factors which can affect its success. This chapter begins by defining BPM and then explores the differences between process driven and functionally driven business environments. The chapter will then look at some specific barriers which have been associated with BPM.

2.2. Business Process Management

The popularity of BPM has grown in recent years (DeToro and McCabe, 1997). BPM is a paradigm shift from traditional functional structures to process orientated thinking (Doebeli, Fisher, Gapp and Sanzogni, 2011). Ko, Lee and Lee (2009 p746) describe BPM as a *'theory in practice [discipline] which has many views, definitions and perspectives'*.

Some authors have defined BPM as a *'structured'* (Zairi, 1997) *'process-driven'* (Bandara, Indulska, Chong, and Sadiq, 2007) *'holistic'* approach (vom Brocke and Sinnl, 2011) which *'integrates information technology with knowledge of business processes'* (van der Aalst, ter Hofstede and Weske, 2003; da Silva, Damian, and de Pádua, 2012) to enable analysis and continuous improvements to be made to business activities (Zairi, 1997) for the benefit of the end customer (Hammer and Champy, 1993; Davenport, 1993; Hammer, 2007). BPM it is not only concerned with what processes occur within an organisation but how those processes interact with each other (Kohlbacher, 2010).

However with such an array of standards (Ko, Lee and Lee, 2009) both academically and commercially formulated, Hill, Pezzini, and Natis, (2008) suggest that terminologies and technologies are poorly defined which increases the risk of misunderstanding between theory and practice. The opinion of *'imprecise terminology'* and *'misapplied'* solutions are also discussed by Havey (2005).

Misperception of BPM and its application is potentially a key reason why many organisations who have attempted to implement BPM as part of their business strategy, have failed to achieve the results they had expected (Lee and Dale, 1998).

Trkman (2010) criticises that there is no finite definition of BPM and states that although it has become a '*popular concept, it has not yet been properly theoretically grounded*' (Trkman, 2010, p125). This lack of definition can be advantageous as it gives organisations the freedom to interpret BPM in their own way and implement a system which is suitable for their needs (Mettler and Rohner, 2009); Nevertheless, this '*freedom*' can cause confusion due to the array of tools and methods available (Röglinger, Pöppelbuß, and Becker, 2012).

A result of having varying interpretations has meant that there is no standard approach for organisations to implement and progress with BPM (Doebeli, Fisher, Gapp and Sanzogni, 2011). With BPM being a broad topic of study (Paim, Caulliroux, and Cardoso, 2008), businesses may try to implement a system which is over complex or too simple which can mean parts of the organisation fail to adopt BPM principles (DeBruin, Freeze, Kaulkarni, and Rosemann, 2005) which in turn may lead to BPM maturity being impeded (Bandara, Indulska, Chong, and Sadiq, 2007). On the other hand, Paim, Caulliroux, and Cardoso (2008, p696) argue that BPM gives the user:

'... a broad, clear, complete and adaptable concept [...] for designing processes, managing processes from day to day, and fostering process related learning.'

Neubauer (2009) and Trkman (2010) support this view as they agree that it allows businesses to be agile in their adoption of BPM depending on changing business requirements; this would include the end customer's needs (Kotler and Levy, 1969; Hammer and Champy, 1993; Davenport, 1993; Hammer, 2007).

2.3. Process versus Function

The focus of many organisations has been based on physical processes which had tangible inputs and outputs (van der Aalst, ter Hofstede and Weske, 2003) yet today, more than 75% of jobs are service based (Bryson and Daniels,

2007). With the increase in service industries and due to technological advancements now means a physical item may not actually be produced (Davis, 2012).

In order to remain relevant and have practical implementation it is important that BPM must not only describe the process, but rather explain how information flows through the process (Gambrill, 2006; Davis, 2012) to ensure organisational goals are met and competitive advantage is gained (Singh, 2012).

Many organisations operate a traditional, functionally driven, work environment. This typically takes the form of individual departments within the same organisation operating as micro businesses or silos where limited or no information is shared with other departments (Bamber, Sharp and Hides, 2000). Fisher (2004) defines organisations who host a silo mentality to be the lowest level of process maturity as departments concentrate on developing their own goals which may not align with that of the wider organisation. Siloed organisations can also lack flexibility and be slow to adapt to changing market need (Bamber, Sharp and Hides, 2000).

BPM looks to optimise value through processes (van der Aalst, ter Hofstede and Weske, 2003) which can have a positive effect on an organisation's competitive advantage (Hung, 2006). Competitive advantage can be achieved if BPM is aligned with the organisation's core processes successfully (da Silva, Damian, and de Pádua, 2012). In addition, a clearly defined approach should be identified with the processes and roles of individuals within the organisation communicated to all stakeholders (McCormack, Willems, Van den Bergh, Deschoolmeester, Willaert, Indihar, Štemberger, Škrinjar, Trkman, Ladeira, de Oliveira, Bosilj, Vuksić, and Vlahović, 2009). This should enable a business to increase the buy-in of the approach (Rosemann and DeBruin, 2005) and thus increase the maturity of BPM implementation allowing a business to adapt to changing business demands efficiently and effectively (Neubauer, 2009).

For BPM to be successful the organisation must migrate from a traditional functionally focused environment to one which is process driven (Fisher, 2004). In order to achieve this, the organisation needs to reflect (Gambrill, 2006) and

consider what their core processes are (Bandara, Indulska, Chong, and Sadiq, 2007). In fact Bandara, Indulska, Chong, and Sadiq (2007), go as far to state that BPM:

'... prescribes that the entire management of the organisation [including] strategy, goal setting ... and planning be based on its core processes'.

Process management is a complex matter as processes rarely function independently but rather interact with other processes (Llewellyn and Armistead 2000; Smirnov, Weidlich, Mendling, and Weske, 2012). Furthermore, Battaglia, Borchart, Sellitto, and Pereira (2012) recognise that service based organisations can be prone to high complexity due to processes being based on personal relationships between the organisation and its customers (Kotler and Levy, 1969; Hammer, 2007). Therefore a drawback to automating systems within BPM is the capability to handle exceptions and special cases which leads to a trade-off between formal processes and informal requirements (Pernici and Weske, 2006).

In order to maximise the alignment of '*current state*' to '*future state*' it is critical for an organisation to identify a model which is suitable and configurable for their needs (Mettler and Rohner, 2009) in order to achieve the desired process driven environment (McCormack et al, 2009).

2.4. Maturity Models and Business Process Management

The purpose of a maturity model is to identify different stages of maturity (Jochem, Geers, and Heinze, 2011) and can be used to assess an organisation's '*current state*' regarding their BPM (Röglinger, Pöppelbuß, and Becker, 2012). The benefit of completing such an exercise is that it provides an organisation with the opportunity to identify weaker areas and guide improvement within processes conducted by the organisation (Iversen, Nielsen, and Norbjerg, 1999). The result of which, may increase overall efficiency (Neubauer, 2009) and long term competitive advantage (Hung, 2006; Singh, 2012).

Maturity models do have limitations. Firstly with over 150 different models to choose from (Spanyi, 2004) an organisation needs to be clear as to what it is

trying to measure. A further limitation of many models is that they may oversimplify reality (McCormack et al, 2009) by illustrating a single dimensional path from low maturity to high maturity (Ruzevicius, Milinaviciute, and Klimas, 2012; Rosemann and DeBruin, 2005). However, DeBruin, Freeze, Kaulkarni, and Rosemann (2005) argue that an appropriate balance needs to be found between '*an often complex reality and model simplicity*' in order for any model to be successfully implemented. To account for this, some maturity models do take into account external factors such as Hammer's (2007) Process and Enterprise Maturity Model and Rosemann and DeBruin's (2005) Business Process Management Maturity Model (BPMMM).

A further, and more important limitation of many maturity models, is the lack of a descriptive and detailed programme of how an organisation can progress from their current state to a higher future, or more mature state of being (Röglinger, Pöppelbuß, and Becker, 2012).

2.5. Barriers to Business Process Management

In order to achieve increased maturity and benefit from the potential advantages of BPM, organisations need to realise and identify the challenges which will face them (Fisher, 2004; Bandara, Indulska, Chong, and Sadiq, 2007).

Within the literature, barriers and critical success factors are discussed in relation to BPM (Bandara, Indulska, Chong, Sadaq, 2007; Rosemann and vom Brocke, 2010; da Silva, Damian, and de Pádua, 2012); however there has been limited published research which looks to identify which factors have the greatest influence over whether BPM is successfully implemented within an organisation.

In order to increase the chances of success, an organisation needs to identify what challenges they will encounter at the start of any BPM implementation project or programme (Bandara, Indulska, Chong, Sadaq, 2007). It is only through consideration of what key factors can reduce the effectiveness of BPM can an organisation prepare when looking to move to a process driven business environment.

Rosemann and vom Brocke (2010) identified a set of six core areas, Strategic Alignment, Governance, Methods, Information Technology, People and Culture. They describe these as six key success criteria for BPM implementation.

Yet a criticism of Rosemann and vom Brocke is that their study concentrates on high level success factors. Bandara, Alibabaei, and Aghdasi, (2009) presented a holistic framework of success factors associated with BPM with each topic sub-divided to form a practical framework for BPM stakeholders to utilise. Furthermore, a weakness of both these studies is that they omit what variables can stop those key success factors being achieved or indeed the affect that each factor has on an organisation's BPM.

2.5.1. Governance and Accountability

Governance should be present within BPM as the lack of ownership of processes can have a negative impact on BPM (McCormack et al, 2009). Few BPM models specify who should fulfil roles when implementing such action (Röglinger, Pöppelbuß, and Becker, 2012) although Kohlbacher (2010) specifies the role of '*process owner*' to be carried out by a manager.

Kohlbacher (2010) suggests that a manager, or process owner, should be identified for each business process, and given end-to-end responsibility for that process. This is also supported by Minnoe and Turner (2012) who found that having clearly defined responsibility and roles is critical to good leadership within BPM. Although there are benefits of having assigned responsibility and control within processes, the element of flexibility needs to be appreciated and carefully managed as there is a risk in formalising and automating systems within BPM may result in a reduction in the capability to handle exceptions and special cases. This in turn, leads to a trade-off between formal processes and informal requirements (Pernici and Weske, 2006). Therefore if the process owner has the ability and authority to make decisions (Dachler and Wilpert, 1978; Bandara, Alibabaei, and Aghdasi, 2009) then the process can be executed promptly to the benefit of the customer (Hammer and Champy, 1993; Davenport, 1993; Hammer, 2007).

Sayer (1998) reported that Middle Management can be a barrier to BPM, as they feel their power and position within the organisation is threatened, this creates resistance to change. Many BPM authors (Willmott, 1995) discuss the importance for all employees, management or otherwise, to be empowered and take responsibility. This notion can leave middle managers confused about their roles and their responsibilities which is a hindrance to organisations, as middle managers are '*the crossroads for change*' (McKersy and Walton, 1991) with Senior Management providing the direction and leadership from the top, and involvement and reporting from the employees from the bottom.

2.5.2. Leadership

Leadership features as a main challenge within BPM and as such is discussed by many authors (Zairi, 1996; Ho and Fung, 1994; Oakland, 1993; Hammer, 2007; Kohlbacher, 2010; Minonne and Turner, 2012).

Senior Management support is outlined by Kohlbacher (2010) as a significant requirement to enable the organisation to realise BPM. Hammer (2007, p112) states that in order to be successful:

'Senior executives [must] support a focus on processes; their employees [must] greatly value customers, teamwork, and personal accountability; they [should] employ people who know how to redesign processes; and they are well organised to tackle complex projects.'

Similarly, Hammer and Champy (1993) recognise that '*strong executive leadership*' along with commitment and understanding throughout all levels of the organisation is critical when organisations face change. Minonne and Turner found in their 2012 study, that the lack of leadership was the largest challenge an organisation faced with BPM, but this can be aided by having well defined roles and responsibilities. However, a criticism of the study is that they do not elaborate on what aspects of leadership were lacking or the size of the impact it had on BPM implementation.

Zairi (1996) identifies the elements of leadership to include '*strategic planning*', '*mission statements and direction*', the '*identification of goals*', '*communication and measurement of processes*', '*decisions*' and finally '*deployment*'.

Middle managers also play an important role within BPM as it is part of their role to relay and establish the vision of the organisation to the employees. In addition, this institutes management commitment across the organisation, with any concerns being discussed openly, with the involvement of all key stakeholders (Bandara, Alibabaei, and Aghdasi, 2009).

2.5.3. Training

Another important barrier identified within the literature is concerning the training of employees. Balzarova, Bamber, McCambridge and Sharp (2004) identified the importance of training to ensure that both employees and management understand what is meant by process management. Moreover, it should not be taken for granted that employees (at all levels) understand the terminology (Van Looy, De Backer and Poels, 2011) for example, what is meant by the term '*process*' (Trkman, 2010).

Terminology used in association with BPM needs to be defined (Ko, 2009) from the offset and reviewed regularly as barriers can develop if people become confused. This will lead to reduced buy-in to the process-driven environment (Balzarova, Bamber, McCambridge and Sharp, 2004). This raises the need for organisations to make an investment in training its employees (Bamber, Sharp and Hides, 1999).

Bamber, Sharp and Hides, (1999) found that although many organisations do regularly invest time and money in showing employees how to work through new or redesigned processes associated with BPM, many organisations struggle to recognise the need to make the same investment (both monetary and time) in educating their employees in understanding the reason, context and benefits of BPM to the wider organisation (Hammer, 2007). This is a significant part of BPM as it insures a reduction in the effect of other potential barriers by maintaining good communication and an open and responsive culture (Zairi, 1997; Llewellyn and Armistead, 2000; Spanyol, 2004; Macleod and Clarke, 2009; Singh, Keil, and Kasi, 2009; Macleod and Clarke, 2010).

2.5.4. Culture

Culture is formed by the beliefs, values, assumptions, and attitudes of a group of people which distinguish them from another (Schein, 2004; Hofstede, 1993; Hofstede, 2005; McSweeney, 2002). Culture and the influence it has on BPM can either assist or hinder its progression within an organisation (Tsai, 2003; Singh, Keil, and Kasi, 2009). For this reason, Bandara, Alibabaei, and Aghdasi (2009) recognise that a culture which embraces change and has open communication where decisions are made based on information rather than attitudes, should be seen as a predecessor for BPM, as culture cannot be altered within a short time frame (Grugulis and Wilkinson, 2002). Having a positive culture can increase employee involvement and encourage understanding and contribution of employees towards realising business objectives (Zairi, 1997; Llewellyn and Armistead, 2000; Spanyol, 2003; Macleod and Clarke, 2009). In fact, Schmiedel, Vom Brocke and Recker, (2013) provide empirical support for Culture being a core factor of BPM.

Nevertheless, there remains limited research which defines the optimum culture an organisation needs to cultivate in order to support a BPM approach (Schmiedel, Vom Brocke and Recker, 2013).

Although Culture is often referred to generally in an organisational context, Vom Brocke and Sinnl (2011) compiled a comprehensive list of authors who have discussed culture in the context of BPM. Despite this, only Zairi (1997) and Armistead, Pritchard and Machin (1999) specify a BPM culture. It might therefore be concluded from this that there seems to be a gap within the literature which details the effect Culture has on BPM and therefore how it can either impede or improve BPM maturity (Schmiedel, Vom Brocke and Recker, 2013).

2.5.5. Motivation

From an organisational perspective the motivation for implementing BPM is to align their business processes with their business needs in the most efficient manner (Hepp, Leymann, Domingue, Wahler and Fensel, 2005). From a stakeholder perspective, Motivation is a key element to develop and maintain within an organisation (Goss, Pascale, and Athos, 1998) as stakeholder

participation will be required if BPM is to be successful (Bandara, Alibabaei, and Aghdasi, 2009). Gostick and Elton (as quoted in Gable, Seung, Marker, and Winiecki, 2010, p17) '*suggest that employee engagement is a key factor in workplace motivation*'. The more motivated employees are the more efficient and productive they will be (Box and Platts, 2005).

Furthermore, alignment of stakeholders with the organisational goal and objectives is critical to the motivation of all involved. Box and Platts (2005, p 371) summarised the problems which can arise due to misalignment between stakeholders:

'Problems caused by misalignment include: confusion; waste of time, money and opportunity; diminished productivity; de-motivation of individuals and teams; internal conflicts and power struggles and ultimately project failure. Misalignment results in time and energy spent doubting, conspiring, guessing or gossiping when that same energy could be deployed in moving an organisation forward.'

Ultimately, employee participation is an important attribute for organisations to develop, especially to gain buy-in with organisational decision making (Dachler and Wilpert, 1978). This idea is supported by Moorcroft (2003) and Ruck and Welch (2012) who found that employees want to know where their organisation is headed and how they can contribute to achieving the vision. However, Van Riel (1995) criticises this opinion due to limited academic knowledge about the importance of communication within the context of corporate strategy.

2.5.6. Strategic Alignment

One of the success criteria is that of strategic alignment of core processes. As already mentioned, for an organisation to achieve a competitive advantage it is important for them to identify their core processes and make them as efficient and cost effective as possible (Bamber, Sharp and Hides, 2000; Hepp, Leymann, Domingue, Wahler and Fensel, 2005; Rosemann and vom Brocke, 2010; da Silva, Damian, and de Pádua, 2012; Singh, 2012). Yet consideration needs to be given to identifying the issues associated with achieving this goal,

when it should be implicit for processes to be aligned with the strategic objectives of the organisation (Neubauer, 2009; Trkman, 2010).

Another point of potential failure is planning. It is important that a plan for the implementation is formed at the outset and ensure it corresponds with the long term strategy of the organisation (Balzarova, Bamber, McCambridge and Sharp, 2004). The time needed for an organisation to adopt BPM within its operations should not be underestimated (Bamber, Sharp and Hides, 1999). Managers can suffer from overconfidence when employing new systems and processes, however the confidence can fade over time as initial progress slows (Hammer, 2007).

Gambrill (2006) argues the importance for Senior Management to establish what is driving the organisation in its quest to implement BPM successfully (Bandara, Indulska, Chong, and Sadiq, 2007) and ensure that it has a logical and realistic plan with clear targets to achieve (Radulescu, Tan, Jayaganesh, Bandara, zur Muehlen and Lippe, 2006). However, it is equally important that once the driving factors are established, that management communicate the information effectively (Yrie, Hartman, and Galle, 2002).

2.5.7. Communication

Organisational communication involves interaction between different people at different levels throughout different departments (Bandara, Alibabaei, and Aghdasi, 2009). Effective internal communication, much like a positive culture, needs to be established prior to implementing BPM (Ruck and Welch, 2012) as it can improve performance and service (Tourish and Hargie, 2003). Communication can therefore be considered as an intangible asset of an organisation (Ruck and Welch, 2012).

In addition to organisational actions, Bandara, Alibabaei, and Aghdasi (2009) suggest in their framework, that the aim of internal communications should be to form channels of information which enable two-way conversation. The result of which creates greater trust between employees and managers.

Managers and Leaders should possess effective and motivational communication skills and tools (Adeyemi and Ositoye, 2010) to be able to

permit the transfer and receive information between all levels of the organisation (Bandara, Alibabaei, and Aghdasi, 2009) in order to support organisational goals (Yrie, Hartman, and Galle, 2002; Van Nostran, 2004; Trahant, 2010; Klenk and Hickey, 2010; Adeyemi and Ositoye, 2010) and promote collaboration (Davis and Eisenhardt, 2011) to maintain employee engagement while creating a strategically focused organisation. Nevertheless, consideration should be given to confirm what information employees want and need from their organisation to ensure a positive work culture is created and maintained (Ruck and Welch, 2012).

Welch (2012) insists that internal communication can be beneficial if it is delivered in a format which is acceptable to employees, as poor communication can be just as damaging as no communication. For example, having a lack of face-to-face communication between management and employees can lead to an increase in the potential for '*distortion*' within communications (Yrie, Hartman, and Galle, 2002).

2.5.8. Value

BPM should possess a level of Value within the business, be it monetary or otherwise. Value can be defined as desirable wants (Kluckhohn, 1951), within an organisational context this can be further defined as what '*a group considers desirable*' dependent upon influential behaviours and ideals of the organisation (Schmiedel, Vom Brocke and Recker, 2013, p 294).

As previously mentioned, an Organisation's culture will be based on a set of values which need to be aligned with BPM in order to be successful in implementation (Schmiedel, Vom Brocke and Recker, 2013). It is important that the processes of an organisation are deemed valuable to employees and managers to improving business performance (Reijers and Mansar, 2005). If the value of each process is not part of the organisation's mind-set, then functional silos will remain and will reduce the effectiveness of BPM implementation efforts (Reijers and Mansar, 2005). Sayer (1998, p248) highlights that BPM '*cannot be accomplished if the values of organisational members are not aligned.*'

2.6. Summary

The objective of this chapter was to satisfy the first aim of the research by understanding contemporary literature on BPM and identify associated barriers of BPM. This chapter began by defining BPM and then explored the differences between process driven and functionally driven business environments. The chapter finished by discussing some specific barriers which have been associated with BPM and the interdependencies they have with one another.

The proposed research will look to identify and elaborate on those barriers with the aim to rank them in order of greatest effect on BPM maturity within Organisation X. In the next chapter, the methodology of the research will be discussed, including rejected methods, with justification of the chosen actions.

3. Methodology

3.1. Introduction

The aim of this chapter is to define and justify the methodological and philosophical approach which will be undertaken to examine the question outlined in Chapter 1. This chapter will commence by defining and then justifying the underpinning research philosophy. The chapter will then explore the research strategy and design which will be implemented to answer the research question. Benefits and limitations of appropriate research tools will be described, and the procedures which the research involves will be outlined. This chapter will also discuss those methods which were rejected by the researcher. Finally, consideration of the ethical implications of the research will be discussed.

3.2. Research Philosophy

In order to answer the question outlined in Chapter 1, the underpinning philosophy of the research will be aligned with an interpretivism approach. Interpretivism, also referred to as phenomenology, considers reality is influenced by the values of society (Fisher, 2010). Thus the researcher's view will be socially constructed and subjective (Saunders, Lewis, and Thornhill, 2009). Interpretivist approach believes that our understanding of the world around us is through social processes which take place between people (Fisher, 2010) and the meaning which society gives those processes (Saunders, Lewis, and Thornhill, 2009).

However, Saunders, Lewis and Thornhill, (2009) raises the importance for the researcher to take an empathetic stance, appropriate to the situation, to ensure the views of those involved are suitably interpreted.

One of the key assumptions of Interpretivism is that business situations are complex and unique (Cameron and Price, 2009; Saunders, Lewis and Thornhill, 2009). The contextualisation of the knowledge gained within a business situation means that theory built with the newly discovered knowledge will not

be generalisable to other business situations (Saunders, Lewis and Thornhill, 2009).

Remenyi, Williams, Money, and Swartz, (1998, p35) argues that the interpretivist approach allows '*the details of the situation [enable the researcher] to understand the reality or perhaps the reality working behind [the situation]*'. In other words interpretivism allows the researcher to explore complex systems that would not be fully explored if a positivist philosophy was employed, as positivism assumes law like generalisations can be made (Remenyi, Williams, Money, and Swartz, 1998, p32).

Due to the research approach chosen, it means that the axiology of the research is '*value bound*' (Creswell, 2007) and the researcher is part of what is being researched and cannot be separated (Saunders, Lewis and Thornhill, 2009). As the researcher is known to the participants it is inevitable that the researcher cannot be detached and therefore assumes a stance of insider researcher.

The ontological position of the researcher conforms to interpretivism in that the nature of reality is one which is socially constructed and therefore heavily subjective (Saunders, Lewis and Thornhill, 2009). Concerning the epistemological position, the researcher will be interacting with what is being researched. Consequently, due to the subjective nature of the research question, the research can be termed as being gnostic as the results will be based on subjective and diverse opinions (Fisher, 2010).

3.2.1. Justification for the Selected Paradigm

Although there is no one veracious way to discover knowledge about the business world, James and Vinnicombe (2002) acknowledge that all researchers have inherent preferences. Burke (2007, p481) describes the interpretivist approach as one which embraces '*natural behaviour of those seeking information*'. It is therefore important that the researcher aligns their preferences to the research question (Blaikie, 2000).

The justification for this choice of philosophy is due to the subjective nature of the research topic which conforms to the interpretivist approach. In addition,

due to the axiology and that the researcher cannot be separated from the study it seems a suitable fit for the research question (Saunders, Lewis and Thornhill, 2009).

Interpretivism is often criticised by Positivists who argue that research should be aligned with scientific methods (Cameron and Price, 2009) and be '*value free*', therefore meaning the researcher should be detached and independent to that which is being studied (Collis and Hussy, 2009) However, the researcher does not believe a positivist approach would be suitable for this research as the details of the situation may be missed or ignored and therefore the full complexity of the business situation not be fully explored or understood.

3.3. Research Strategy

The research strategy being employed is one which aligns with the research aims which are concerned in identifying and then ranking barriers associated with BPM within Organisation X, as outlined in Chapter 1. Furthermore, the researcher's preferences have also been taken into consideration (James and Vinnicombe, 2002).

The research will be conducted through a qualitative case study approach as it will be based within a single organisation. This also supports the choice of the axiology being within a bound system (Creswell, 2007) a benefit of which means it will allow a detailed descriptive analysis to be formed in the context of a specific business situation. Furthermore, being based within an organisation enables data collection to be conducted onsite within a natural setting (Creswell, 2007).

An inductive approach is being utilised owing to the qualitative nature of the research question and aims as outlined in Chapter 1. The inductive approach will work in agreement with the chosen philosophy as it too assumes there is a close understanding of knowledge based on the context of the situation, and that understanding is gained through the meaning people attach to events (Saunders, Lewis and Thornhill, 2009).

A criticism of the inductive approach is that it can be an uncertain path for a researcher to take as there is a risk that no patterns will be found in the data

collected. However, in balance the approach does provide the researcher with a flexible structure in which to alter the emphasis of the research as progression is made (Saunders, Lewis and Thornhill, 2009). Smith (1983, p10 - 11) agrees by arguing that '*In quantitative research facts act to constrain our beliefs; while in interpretive research beliefs determine what should count as facts.*'

The method of data capture will be through an adaptation of Schmidt, Lyytinen, Keil, and Cule's (2001) Delphi method. The Delphi method which is to be used within this research is further outlined in section 3.4 of this chapter.

3.3.1. Rejected Methods

The methods which were considered by the researcher but rejected on grounds of unsuitability are discussed below.

Questionnaires have many advantages; they are scalable and can gather a large amount of information quickly and cost effectively (Cameron and Price, 2009). Most people are comfortable with answering questionnaires as they are a commonly used method of data capture and depending on the questions posed the results can be easily counted, assessed and compared (Cameron and Price, 2009). However, it is crucial that the right questions are posed to the right people to ensure the data collected will be useful.

For this research question, a single questionnaire would not have been sufficient in collecting the level of information needed to achieve the aims of the research. The researcher would have needed to carry out further methods to validate the conclusions drawn.

Unlike questionnaires, interviews, especially semi-structured or in-depth interviews would have given the researcher plenty of detailed information regarding the research topic (Saunders, Lewis and Thornhill, 2009) as long as appropriate questions were asked. However, interviews can produce bias depending on the participants who agree to participate as interviews can be time consuming (Robson, 2002); this is in respect both to performing each interview and capturing and analysing/coding the data. Therefore the reason this research method was rejected is due to time constraints of the research project.

3.4. Research Design

The Delphi method is a structured iterative communication process used to facilitate group problem solving (Linstone and Turloff, 1975) and gain consensus (Keeney, Hasson, and McKenna, 2001), especially where there is incomplete knowledge available about the complex problem (Adler and Ziglio, 1996). The aim is to capture reliable consensus of opinions from a panel of defined experts anonymously (Jairath and Weinstein 1994; Keeney, Hasson, and McKenna, 2001; Okoli and Pawlowski, 2004; Skulmoski, Hartman, and Krahn, 2007).

3.4.1. Design of the Delphi Method

The Delphi method will be divided into three rounds. The first round will be an open ended question asking participants to list up to five barriers they believe are present which prevents, reduces or stops effective BPM within the organisation (Appendix 2). The aim of the question is to elicit as many ideas during this round (Issac and Michael, 1995; Adler and Ziglio, 1996) which will be referred to as the brainstorming round. Each participant will be provided with an introduction to the subject with some brief definitions to aid understanding. They will then be asked to list five items they believe are barriers to BPM either at an operational unit level or as an organisation. With each item listed, the participants are also asked to add a brief description to ensure that the researcher understands the context of the barrier. The results from the first round will be collated with duplicates removed and similar items will be grouped together and summarised for use within the second round (Nworie, 2011). The ideas from the brainstorming round will ensure that the list presented to the participants in the second round will have common definitions. The concatenated and summarised descriptions will construct a list to be presented back to the participants in the second round. During the second round, the participants will be asked to review the refine the list and ensure they understood the definitions and that the descriptions do represent the barriers identified in the first round. Participants were then asked to identify five barriers from the refined list.

Iteration 1 – Brainstorming

- Introduce the research project to the participants with an explanation of the research aims and a definition of BPM and its context within Organisation X.
- Propose initial question - to list up to five barriers they believe are present which prevents, reduces or stops effective BPM within the organisation.
- Anonymous to each other the participants need to list up to five barriers.
- The answers are then submitted back to the researcher and duplicates will be removed. Similar items will be merged.
- The refined list will then be re-sent to participants for validation.

The purpose of the second round is to refine the list further and to form a more focused list for the participants to rank in the third and final round. The final list which will be the basis of the ranking round will be formed from the items which have been chosen by 50% or more of the participants.

Iteration 2 - Review and Refine

- Each participant, still operating independently, will be asked to narrow down the list to the five main barriers but not in any particular order.
- The results will be submitted and the most common factors will be retained.
- This list is then submitted back to the participants.

The final round is the Ranking round. Participants will be asked to list the items in order of greatest to least effect, 1 being greatest effect. Dependant on the rate of consensus, further rounds maybe required until an acceptable level of consensus is reached.

Iteration 3 – Ranking

- The participants, still working independently, will then be asked to rank the list of barriers they generated in round two into what they believe is the greatest barrier to BPM implementation through to the least.
- The aim is to rank the top five barriers within Organisation X.

If further clarification is needed follow up interviews/feedback sessions will be organised.

3.4.2. Justification for the Selected Methodology

BPM is referred to as a '*theory in practice*' topic (Ko, 2009). Therefore using a case study approach is suitable, as it allows a contemporary phenomenon to be studied within a real life context (Robson, 2002).

Using an inductive approach will assist in identifying and ranking perceived barriers of BPM within Organisation X. With the area of study being a holistic management approach (Vom Brocke and Sinnl, 2011) it is an appropriate way to capture information which would be difficult to capture in a quantitative manner, as the system needs to be viewed as a whole not just measuring a sub-section (Creswell, 2007).

There are many advantages of using the Delphi method. Firstly, it is a mature and adaptable research method (Skulmoski, Hartman, and Krahn, 2007) which has been used with the BPM area previously (Rosemann and DeBruin, 2005) which provides empirical evidence to support the suitability of this methodology within this research.

The anonymity of participants within the Delphi method is discussed by Butterworth and Bishop (1995) as being a strength of the Delphi method that participants do not have the opportunity to '*follow the leader*'. This produces an increased likelihood that individuals will speak openly and honestly and not be intimidated or dominated by another member of the group (Murphy, Black, Lamping, McKee, Sanderson, Askham and Marteau, 1998). Rowe, Wright and Bolger (1991) disagrees in part, asserting that a group will outperform its strongest member, but agrees with Jairath and Weinstein, (1994) that personality and seniority of group members can create bias in a group's response.

Moreover, Rowe, Wright and Bolger (1991) suggest that the Delphi method can provide a more accurate answer or consensus to a question compared to answers gained through single individuals or focus groups. Sackman (1975) contests this opinion suggesting that the best response may be lost if a consensus approach is taken.

A further strength of the Delphi method is due to its structured nature meaning that information gathered at each round is concise to the question posed at that point (Lindeman, 1975). However, this is criticised by Williams and Webb (1994) who argue that participants must invest a significant amount of time. Cuhls (2003) also reported a related disadvantage of the Delphi method is that it can be time consuming for the researcher to collate and assess the information between each round.

3.4.3. Research Standards

Fisher (2010) suggests that qualitative data generated through small samples of participant groups are subject to the judgement of the researcher as to whether or not the findings are transferable or generalisable. However Lincoln and Guba (1985) questions whether it is for the reader to decide if the research can be applied to other situations. Therefore, the researcher will make a conscious effort to provide a detailed description of the research for the reader.

Validity is important to the researcher as well as the practical application of the findings. Due to the need for participants to validate information between each round of the Delphi, it is expected that this will strengthen the validity of the results. However, it is noted that the response rate will ultimately affect the validity of the research.

As for reliability, there is no evidence that Delphi methods are reliable as results are not guaranteed to be reproducible. For example, if a different new panel were asked the same question in round one, they may produce different results than the panel used within this research as their experiences will be different. To overcome this Lincoln and Guba's (1985) criteria for qualitative research will be applied to assist in producing credible results. The criteria are based on truthfulness, applicability, consistency, and confirmability. The researcher will take a reflective stance to ensure these criteria are met within the research.

Truthfulness considers if the researcher has '*established confidence in the truth of the findings*' (Krefting, 1991, p215). Applicability considers the degree to which the findings of the research can be applied or generalised to other contexts or situations (Lincoln and Guba, 1985), Consistency refers to the consistency of the data collected and if the findings of the research are

replicable. Finally, confirmability considers the effect of any bias which may be introduced through the methods and tools executed within the research (Lincoln and Guba, 1985).

3.5. Research procedures

3.5.1. Number of Iterations

The minimum number of iterations carried out will be three. Due to time constraints this is a workable number of iterations as a pattern of consensus will have emerged (Nworie, 2011). An important part of the Delphi method is its iterative nature as each round is working to build consensus of the group (Nworie, 2011). Additional iterations may be used if consensus is not reached see section 3.5.6 for the definition of consensus within this research project.

3.5.2. Interaction

Interaction between the researcher and participants will primarily be through email, supported by face-to-face meetings. An advantage of email means it is quick, accessible and convenient for participants to complete. The digital format allows efficient consolidation of data by the researcher. A disadvantage of email is that it is not anonymous (Fisher, 2010). Therefore, emails must be sent by the researcher either individually or via blind-copy. A further disadvantage of email is that the researcher cannot guarantee that responses are from the intended participant. However to reduce this risk the researcher will follow up with each participant either face-to-face or via the telephone to ensure they have received the email respondents and that they understand what has been asked of them.

3.5.3. Participant Selection

Although Okoli and Pawlowski, (2004) recommend between 10-18 panellists most researchers agree that 10 to 50 panellists can engage in a Delphi study (Delbecq, Van de Ven and Gustafson, 1975; Jones and Twiss 1978; Turoff, 1975; Okoli and Pawlowski, 2004), although a few as 4 people (Brockhoff, 1975) or as many as 1685 people (Reid, 1988) can be used. For this research project 23 participants will be invited to participate, with the expectation that there will be a percentage who wishes not to participate. Although the researcher aims to have a greater than 80% response rate (Sumsion, 1998).

Further justification for the size of the panel is that it identifies a manageable number of participants (Okoli and Pawlowski, 2004).

The participants (also referred to as '*experts*' within the context of many Delphi methods i.e. McKenna, 1994) will be specifically chosen through purposive sampling based upon the participant's knowledge of the organisation and its processes (Powell, 2002).

3.5.4. Expertise Criteria

The purpose of defining '*experts*' is that it is assumed they will be able to assess the question posed competently (Cuhls, 2003). McKenna (1994, p1221) defines experts as '*a panel of informed individuals*'. Participants will be members of the management team (both Senior and Middle) as well as a few appropriately experienced Employees who should have the correct level of expertise (Cuhls, 2003) of the current processes within Organisation X. In addition, it is important to involve managers as one of the success factors identified within the literature for BPM is that there is a level of management buy-in (Rosemann and DeBruin, 2005).

3.5.5. Data Collection

As detailed earlier in section 3.4.1, the Delphi method will take the form of three rounds each featuring a focused and specific questionnaire. Each round will utilise information captured from the previous, apart from the first which is a brainstorming exercise. The participants will have the opportunity to review processed information between each round to ensure that understanding between the researcher and participants is aligned.

3.5.6. Determining Consensus

Throughout the literature there is no agreement on what actually constitutes consensus (Hasson, Keeney, and McKenna, 2000) as it is dependent on the number of participants and the aim of the research.

Green, Jones, Hughes and Williams (1999) suggests that 80% of responses should be matched in order to declare a consensus, compared to Sumsion (1998) who specified 70% or greater. For this research, the researcher will follow the guidance of McKenna (1994) and Loughlin and Moore (1979) work

who stated consensus was reached with results of 51% and over. However, Crisp, Pelletier, Duffield, Adams, and Nagy (1997) does question the value of using percentages as a measure of consensus, as the patterns formed throughout the iterations should be a reliable indicator of the panel's belief.

3.6. Ethical Considerations

An explanation of the research will be given to each participant and voluntary consent will need to be received. This will be done verbally and via email. Formal consent will be granted once the participant submits their first list from round one.

Throughout the research the participant's anonymity will be maintained as they will not interact or meet each other. This will also aid the reduction of bias within the results as the participants will not be influenced or pressured by other members of the panel (Goodman, 1987) and therefore give open and honest answers. Their identity will only be known by the researcher, this is to aid follow up if further information or clarification is needed, however their responses will be kept confidential and any identifiable information will be removed prior to being used within the research.

Prior to any activities being carried out, ethical approval will also be sort from the University of Chester to ensure the research complies with the ethical guidelines defined by the University.

3.7. Summary

The aim of this chapter was to define and justify the methodological and philosophical approach which will be undertaken to examine the question outlined in Chapter 1. This chapter commenced by defining and then justifying the underpinning research philosophy. The chapter then explored the research strategy and design which will be implemented to answer the research question. Appropriate research tools were described, and the procedures which the research involves outlined. The chapter finally considered the ethical implications of the research. In the following chapter, the findings from the research will be presented.

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4. Findings

4.1. Introduction

This chapter will discuss the findings of the research having applied the methodology outlined in Chapter 3. The focus is to satisfy the aims outlined in Chapter 1:

- i. To identify the perceived barriers associated with BPM implementation in Organisation X.
- ii. Prioritise the barriers in order of greatest (to smallest) preventers in the realisation of increased business process management Organisation X in order to identify the greatest preventer of implementing BPM within Organisation X.

The results from each stage of the Delphi method will be presented in the form of appropriate tables and a series of bar charts and radar diagrams where applicable along with explanation and justification of the data displayed. The analysis of key findings will be presented in Chapter 5, Analysis and Conclusions.

4.2. Analysis of Respondents/Non-Respondents

The participants were specifically chosen by the researcher due their knowledge of the organisation. The individuals chosen formed three sub-groups of individuals; Senior Management, Unit Management, and Employees.

23 participants were originally identified to participate in the research. The panel of 23 consisted of seven Senior Managers which represented 100% of the organisation's Senior Management team. Eight Middle Managers were approached to participate in the research which represented 89% of the Middle Management team and eight Employees were also invited to participate in the research.

Out of those asked to participate the following table shows the breakdown of the panel.

Panellists	Number of those who responded
Senior Managers	7
Unit Managers	7
Employees	5

Table 1: Shows the breakdown of participants per sub-group and their respective representations within the context of the organisation. The total panel was made up of 19 individuals.

100% of the Senior Managers responded to the initial invitation to participate in the Delphi study. In addition 100% response rate was received from this group of individuals for each of the three rounds of the Delphi Study.

One Middle Manager did not participate in the study due to the individual not being able to invest the time needed to complete all the rounds of the Delphi study. From the seven Middle Managers who did participate a 100% response rate was received from this group of individuals for each of the three rounds of the Delphi Study.

Five Employees agreed to participate in the study of which a 100% response rate was received from this group of individuals for each of the three rounds of the Delphi Study. The three individuals who choose not to participate could not guarantee that they could invest the time to fulfil all the rounds of the Delphi study due to overseas projects and other project deadlines.

4.3. Findings from the Delphi Study

4.3.1. Round One - Brainstorming

The aim of round one of the Delphi study was to generate a list of barriers facing the organisation with regards to BPM. 19 participants made up the panel who took part. Each was asked to list up to 5 barriers and a description each. The description was to ensure the context of each identified barrier was understood by the researcher. Ninety-two barriers were listed by the panel. The researcher then concatenated the results in an effort to remove duplicates and merge those which were similar or the same.

The table below shows an example of the data which was collected from the first round and which formed the basis for the Culture barrier which was used in round two.

Barrier	Original Term	Description
Culture	Culture	The culture of the organisation is quite disparate in terms of people getting on with things in their own way as opposed to following a structured process.
	Culture	The culture of the business is more like a start-up/small business where business processes are more organic and informal.
	Culture	Culture is a bit problem in our business, we have a culture of that is how it has always been done, until that changes new processes are hard to implement.
	Implementation	There is a culture of 'no change' and this restricts successful implementation of process change.
	Integration	Difficulty integrating processes between departments as there is still a silo mentality with managers who are sometimes loathed to commit resource.
	Motivation	We don't appear to have a "can do" culture, there are pockets where this is not the case however it's a barrier to ideas and change...
	Silos	We have a culture where individuals sit in their box and do not consider implications of their activities across the wider business. Lack of cross training and appreciation for wider business

Table 2: Shows a subset of data of the original barriers collected in the brainstorming round. In this example seven barriers were concatenated in to the final definition of Culture.

In the column labelled '*Original Term*' is the term which was given by a participant along with their description. In the example above it was clear to see that three used the term '*culture*' and the description supported the context of it being the culture within the organisation. '*Implementation*', '*Silos*' and '*Motivation*' were included in the group as the description identified culture as the context.

It should be noted that Motivation was a barrier identified in its own right but the researcher believed the context of the description by this participant fitted more closely with Culture rather than the Motivation category.

The contexts of '*Integration*' also fitted with the Culture barrier as it described silos and difficulties departments have dealing with each other. With the

researcher having personal awareness of the organisation, the researcher associated this barrier with the historic behaviours and beliefs that management have established within the overall culture of the business. Another researcher without this knowledge may have interpreted this and the other barriers differently.

4.3.2. Round Two – Review and Refine

Using the refined results from the first round generated a list of twenty-five barriers which were then presented back to the panel and asked to confirm that they agreed with the refined definitions (Appendix 4). The results shown in Figure 1 represent the response from the participants.

Accountability was chosen by 72% of the panel as one of the main challenges the organisation faces. Culture was the next barrier identified by 50% of the panel. Leadership and Communication was selected by 39% of the panellists, followed by Value being selected by 33% of the panel. This is then followed by Motivation, Budgetary and Resource Management challenges each receiving 28%.

Although identified in the first round, Business complexity, Decision Making and Politics was not selected by any participant.

Results of Second Round of the Delphi Study - identification of the most Predominant Barriers within Organisation X

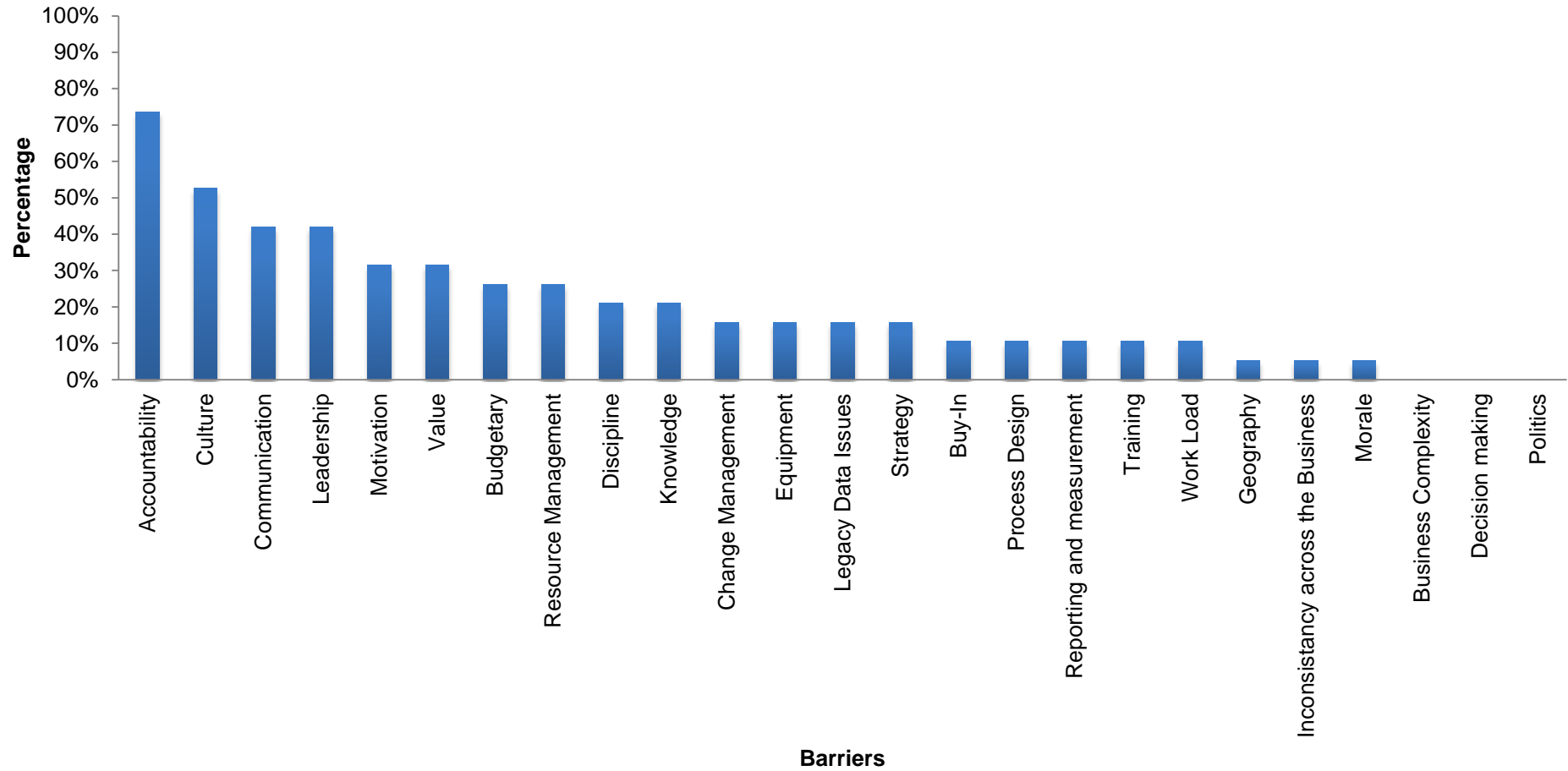


Figure 1: Shows the results from the Second Round of the Delphi Study - identification of the most Predominant Barriers within Organisation X

In order to answer the second research aim, the researcher wanted to identify the barriers which had been identified by a significant proportion of the panel. The results by each sub-group were then reviewed and the barriers which were selected by 50% or greater are presented in Figure 2.

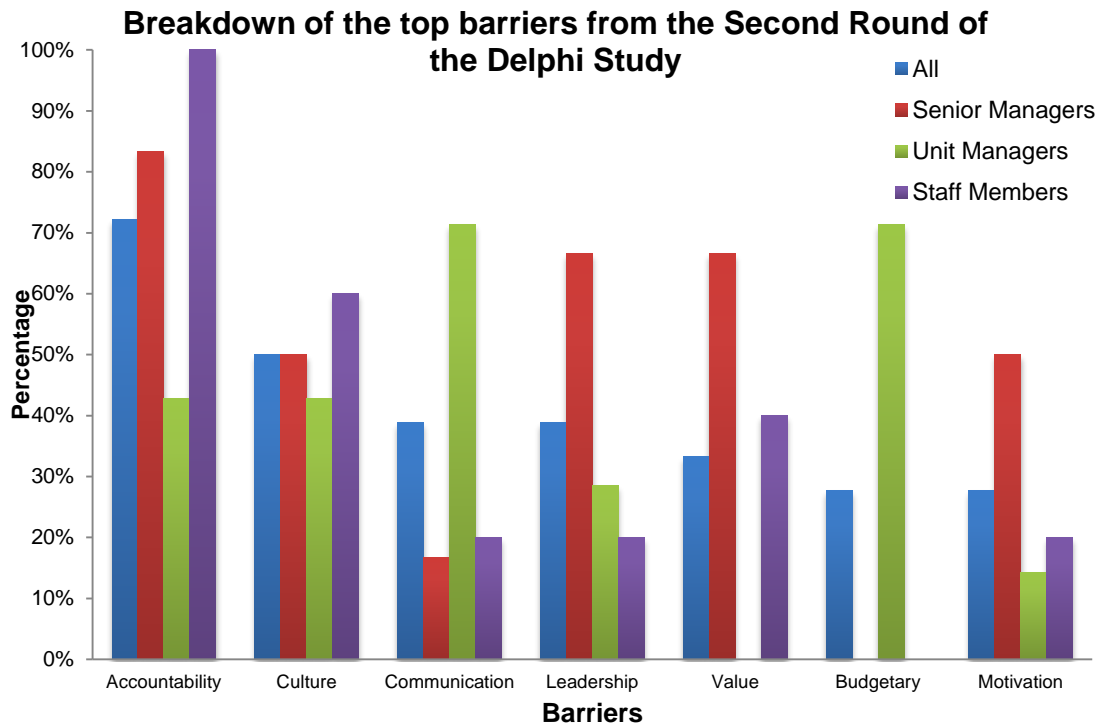


Figure 2: Shows the breakdown of the top barriers from the second round of the Delphi Study. The top seven barriers are based on 50% or more of the panel selecting each barrier

The graph indicates that all three sub-groups agreed to some extent that Culture and Accountability are significant barriers to the organisation. However, the extent to which the three groups agree appear to be vast. The Senior Managers and Employees seem to have a similar perspective to Accountability as 100% of the Employee group and 83% of Senior Managers group selected Accountability as a significant barrier to BPM within the organisation compared to only 43% of Middle Managers selecting it as a barrier. A similar trend is also identified with Culture. Senior Managers and Employees seem to have similar perspective, as 60% of the Employees and 67% of Senior Managers selected Culture as one of the five main challenges faced by Organisation X compared to only 43% the Middle Manager group selecting it as a barrier.

It should be mentioned that Accountability and Culture were the only two barriers the Employee group identified significantly with more than 50% of the group selecting them.

It is clear to see that the Senior Managers seem to have consensus within their group, with five barriers being identified by 57% or more. Accountability and Leadership received the highest number of votes being selected by the most number of individuals.

Only Senior Managers and Employees identified the lack of value in processes as a barrier within the organisation.

The Middle Manager group only identified two barriers with a consensus ranking of over 50% (see section 3.5.6) The group agreed strongly that Communication and Budgetary barriers were the greatest barriers within the organisation with each barrier receiving 71% of the selection.

With Middle Managers being the only group to acknowledge Budgetary as a barrier the researcher approached the individuals for further context on the topic that had been selected. The researcher learned that the issues and examples which were being raised were actually related to communication about budgetary matters rather than budget and costs matters exclusively. Therefore budgetary was omitted from the ranking options in round three.

With the removal of budgetary, six out of twenty-five barriers were identified by the researcher to have reached consensus (see section 3.5.6) within the panel of individuals. The six barriers represented 55% of all selections made by the participants.

4.3.3. Round Three - Ranking

In the third and final round of the Delphi study the participants were presented with the six barriers from the previous round; Accountability, Culture, Communication, Leadership, Value, and Motivation.

In order to answer the third research aim, participants were asked to rank each barrier 1 to 6, 1 being the greatest barrier for the organisation to overcome.

The distribution of the results from the third round is presented in Figure 3.

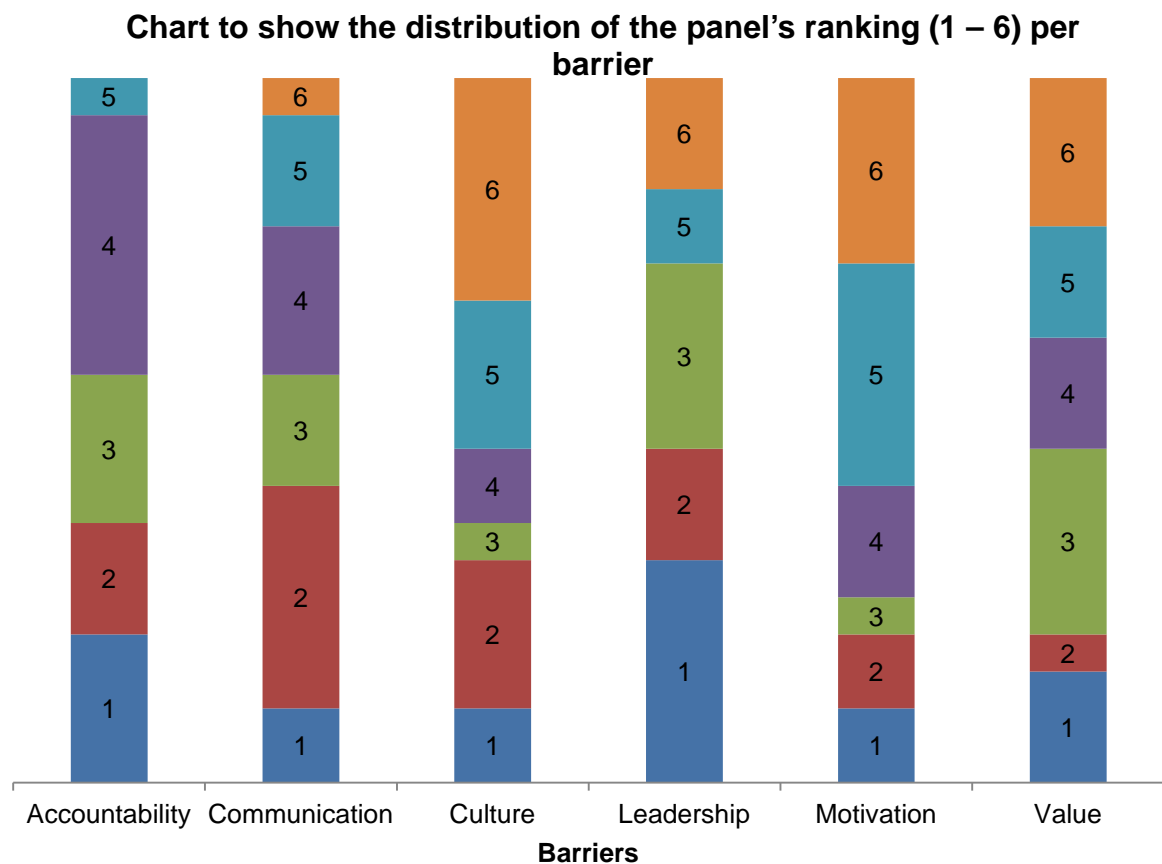


Figure 3: Shows the distribution of the panel's ranking (1 – 6) per barrier

Within the results it is possible to identify a ranked order based on the mode:

1. Leadership
2. Communication
3. Value
4. Accountability
5. Motivation
6. Culture

Figure 4 presents the mean results of each sub-group and the combined mean. It can be seen that each group is showing a trend toward Leadership and Communication being the greatest barriers the organisation needs to overcome; Motivation appears to be the least.

No obvious trends can be identified from the Senior Manager group as Accountability, Value, Leadership and Culture seem to focus around a mean rank of 3.0. However, Communication averages a rank of 3.9 with Motivation averaging the highest ranking position of 4.4.

A chart showing the mean ranking values from the third round of the Delphi Study

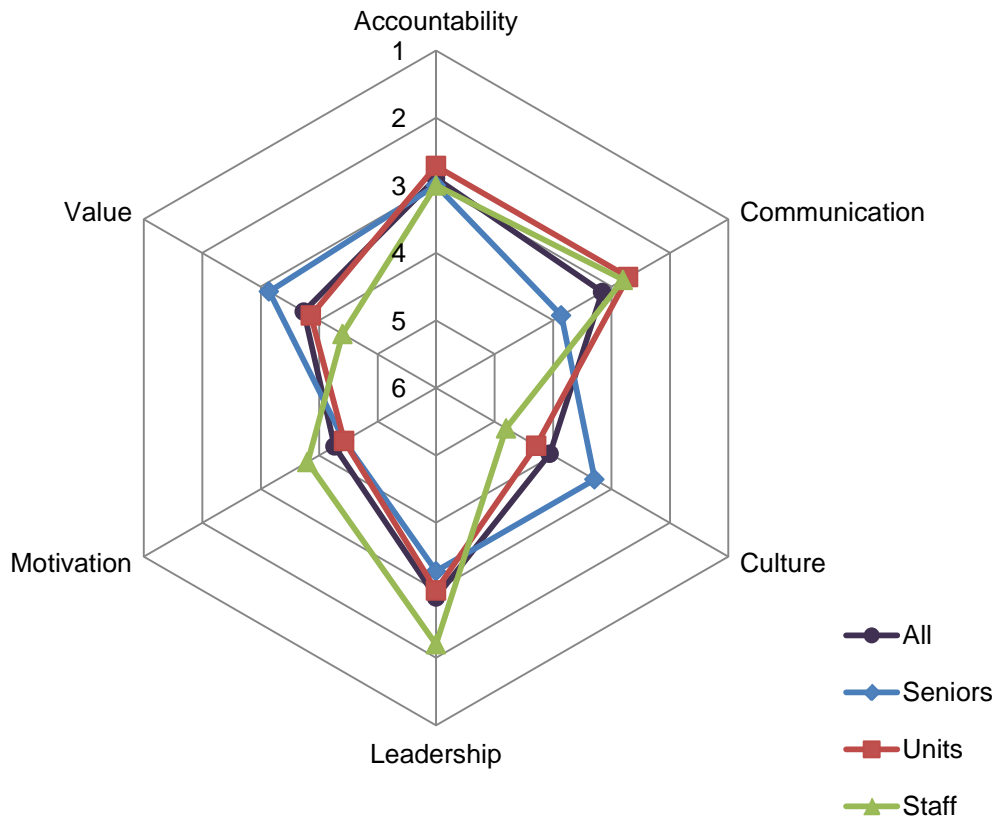


Figure 4: A radar chart showing the mean ranking values of each of the sub-groups

Within the Middle Manager group, a slightly clearer trend can be seen towards Communication and Accountability being ranked as the most important barriers to overcome both having a mean rank of 2.7. This is then followed by Leadership with a mean rank of 3.0, Value with a mean rank of 3.86, Culture with a mean rank of 4.29, and finally, Motivation is the least barrier with a mean rank of 4.43.

Within the Employee group, a strong trend is seen towards Leadership being the greatest barrier to overcome with a mean rank of 2.2, the highest mean rank of any group. This is then followed by Communication with a mean rank of 2.8. Accountability received a mean rank of 3.0 with Motivation scoring 3.8. The other strong trend identified within the Employee group was that Culture appeared to be least greatest barrier to overcome with a mean rank of 4.8.

It is also noted that the Senior and Middle Managers agreed strongly that Motivation is the least significant barrier to overcome with a difference of 0.03.

Also the Middle Managers mean rankings appear to trend similarly to that of the mean value of all the groups ranking.

4.4. Summary

In this chapter, the results from each round of the Delphi method have been presented using appropriate figures and descriptions. The researcher has endeavoured to establish the relevant data to answer the research aims identified in Chapter 1. The analysis of the findings within the context of contemporary literature as discussed in Chapter 2 will be presented in Chapter 5. Relevant conclusions will be drawn from the analysis and presented in the next chapter.

5. Analysis and Conclusions

5.1. Introduction

The aim of this chapter is to draw overall conclusions of the research and answer the research question as defined in Chapter 1:

What barriers are perceived to be preventers in a serviced based organisation realising business process management?

After review of relevant academic literature and the collection of data using the methodology outlined in Chapter 3, this chapter will now analyse the findings presented in Chapter 4. Conclusions based on those findings, along with current academic knowledge as outlined in Chapter 2 will be discussed, ensuring that the research aims have been achieved.

Additionally, a critical evaluation of the adopted methodology will be presented. The limitations of the research will also be addressed followed by potential opportunities for future research.

5.2. Critical evaluation of Adopted Methodology

In order to answer the question outlined in Chapter 1, the underpinning philosophy of the research was aligned with the interpretivism approach. An Interpretivist approach allowed the researcher to explore the complex question within the context of a service based organisation, which would not have been fully explored if a positivist philosophy was employed, as positivism assumes law like generalisations can be made (Remenyi, Williams, Money, and Swartz, 1998, p32).

Interpretivism is criticised by Positivists who argue that research should be aligned with scientific methods and be 'value free' (Cameron and Price, 2009), therefore meaning the researcher should be detached and independent to that which is being studied (Collis and Hussy, 2009) However, the researcher was known to all the participants and therefore could not be detached from what was being researched.

The Delphi method was advantageous as it employed a structured iterative communication process which facilitated a group approach to a complex problem (Linstone and Turloff, 1975; Adler and Ziglio, 1996).

A benefit of its structured nature, meant that the information gathered at each round was concise and relevant to the questions presented (Lindeman, 1975). Cuhls (2003) criticises that Delphi can be time consuming for the researcher to collate and assess the information between each round. Although this was true for the information collected from the first round. For subsequent rounds, the data was concatenated, presented and redistributed in a timely manner by the researcher.

A criticism of the Delphi was the potential bias within the participants, as the Delphi method calls for the use of '*experts*'. To reduce any effect of bias, the researcher selected approximately equal numbers of individuals throughout all levels as detailed in section 4.2 to gain fair representation of the organisation.

As previously highlighted in section 3.5.6, there is no agreement on what actually constitutes consensus within the literature (Hasson, Keeney, and McKenna, 2000). For this research, the researcher followed the guidance of McKenna (1994) and Loughlin and Moore (1979) who stated consensus was reached with results of over 50%. This was achieved as the rate of consensus reached after the second round was between 50% and 100%. Furthermore, Crisp, Pelletier, Duffield, Adams, and Nagy (1997) suggestion was also applied as the researcher looked to identify patterns formed throughout the iterations as an indicator of the panel's belief.

Due to time constraints, the number of rounds was kept to three. This decision was based on McKenna (1994) as it was suggested as a reasonable number in which to identify consensus across the participants and answer the aims of the research. The number of rounds was also based on the concern that participant response rate may be decreased if there were too many rounds (Keeney, Hasson, and McKenna, 2001). However, the response rate of each round was 100% so a fourth round may have been beneficial to further validate the final ranked results.

5.3. Analysis and Conclusions of each Research Aim

5.3.1. *Understanding of contemporary literature on business process management and factors which can affect its success*

In Chapter 2, a literature review was presented in order to satisfy the first objective. As detailed in section 2.2, it is clear from the review that there is a vast array of BPM definitions defined within academic literature, yet there is no consistent definition which Organisation X can refer to. This presents both strengths and weaknesses. On one hand, having no pre-defined '*rules*' allows the Organisation to be agile in its implementation of BPM, but it also means that lack of standards and meanings can lead to misperceptions of BPM and its application.

In order to be relevant and have practical application with the Organisation, BPM must not only describe the processes performed within Organisation X, but rather explain how information flows through the process (Gambrill, 2006; Davis, 2012) to ensure organisational goals are met and competitive advantage is gained (Singh, 2012).

As BPM looks to optimise value through processes (van der Aalst, ter Hofstede and Weske, 2003), it is suggested that Organisation X continues to migrate from a traditional, functional, siloed based environment as mentioned in section 1.1, to a process driven environment (Fisher, 2004) as discussed in section 2.3. Furthermore, da Silva, Damian, and de Pádua, (2012) suggest that competitive advantage can be achieved if Organisation X identify their core processes. A recognised challenge highlighted by Battaglia, Borchardt, Sellitto, and Pereira (2012) is that service based organisations can be prone to high complexity. This is applicable to Organisation X, as there are processes which are based on personal relationships with its customers (Kotler and Levy, 1969; Hammer, 2007).

In order to benefit from the potential advantages of BPM, Organisation X must identify the challenges and barriers which are currently present (Fisher, 2004; Bandara, Indulska, Chong, and Sadiq, 2007). This is further considered by the second aim in section 5.3.2.

5.3.2. Barriers associated with Business Process Management within Organisation X.

After conducting two rounds of the Delphi method, twenty-five barriers were identified. These are presented in section 4.3.2, Figure 1.

Although identified within the first round, the results presented in Figure 1 suggest that business complexity, decision making and company politics has limited impact on BPM within Organisation X, since no one selected them as being a significant challenge. As they were raised in the first round, it suggests that certain areas of the organisation do experience issues with business complexity, decision making and company politics. The impact may not be as significant as the other options however.

Battaglia, Borchardt, Sellitto, and Pereira (2012) and Paim, Caulliraux, and Cardoso (2008) do recognise business complexity as a factor which can effect BPM as business complexity can lead organisations to become inflexible in the ability to react to customer need. Dachler and Wilpert (1978) also raise the point about the complex interdependencies within organisations, which in the case of Organisation X, potentially may be remnants of a silo mentality.

In regards to decision making, this may not have been chosen by the participants during the second round of the Delphi method due to its close relation to the Accountability barrier.

This is supported by Bandara, Alibabaei, and Aghdasi's (2009) holistic framework which associates decision making with Culture and Accountability of people. Culture and Accountability were the most selected barriers during the second round of the Delphi, with 50% and 72% of all participants selecting them respectfully. In conclusion, the researcher may have allocated decision making as an independent barrier, were actually it may have just have been a symptomatic issue associated with other identified barriers.

There were fifteen barriers identified within the first round which scored between 10-30% during the second round. As the participants answers were known to the researcher, a pattern was noticed were participants selected the same barriers they had identified in the first round. As the participants represented all departments within the organisation, each with their own issues, this would

account for the small number of votes for these barriers. In addition to this, it is also likely that when reviewing the barriers there were others listed which had greater significance.

Within the fifteen barriers, strategy and training were identified, yet, were not selected as significant challenges to BPM within the context of Organisation X. This contradicts some academic authors, including Balzarova, Bamber, McCambridge and Sharp (2004) who identified the importance of training in ensuring that both employees and management understand what is meant by process management. Hammer (2007) supports this argument as he suggests that employees should receive training to help them understand the reason, context and benefits of BPM to the wider organisation. To this end, training has also been discussed as a significant part of maintaining good communication and an open and responsive culture (Zairi, 1997; Llewellyn and Armistead, 2000; Spanyi, 2004; Macleod and Clarke, 2009; Singh, Keil, and Kasi, 2009; Macleod and Clarke, 2010). Both Communication and Culture were selected as two of the top barriers, therefore it is an important requirement for Organisation X to consider.

Although strategy or strategic alignment was not identified as a key factor, it should not be dismissed by Organisation X. Singh (2012) that strategic alignment of core processes is as an important factor to achieve competitive advantage.

Neubauer (2009) and Trkman (2010) argue that for an organisation to be successful it should be implicit for processes to be aligned with the strategic objectives of the organisation. Contrary to their opinion, within this research only one Senior Manager raised Strategy as a challenge in both the first and second rounds of the Delphi. If Senior Management fails to establish what is driving the organisation in its quest to implement BPM successfully (Gambrill, 2006) then the progress of a BPM within the Organisation may be limited. In conclusion, if Organisation X does not recognise the importance of strategic alignment as a foundation or prerequisite of BPM then regardless of other factors, the progress of the organisations process may be reduced (Rosemann and vom Brocke, 2010).

5.3.3. Priority of the Identified Barriers

Consensus was reached with six barriers being identified as the greatest challenges to BPM within the Organisation (shown in Figure 2, section 4.3.2). The six barriers identified were ranked during the third round of the Delphi in order of greatest (Ranked 1st) to least (Rank 6th) as presented in section 4.3.3. Analysis and conclusions of each of the six barriers will now be discussed.

5.3.3.1. Leadership

Leadership was identified as the most significant barrier within Organisation X, which is an opinion supported throughout much of BPM literature (Zairi, 1996; Ho and Fung, 1994; Oakland, 1993; Hammer, 2007; Kohlbacher, 2010; Minonne and Turner, 2012). Leadership was identified across all sub-groups as a barrier. The description which was generated by the participants stated *'...must be assigned at the start of the process and maintained through to completion'* and *'Often no one assumes leadership over a project, which leads to indecision and delays.'* This is supported by Minnoe and Turner (2012) who found that having clearly defined responsibility and roles is critical to good leadership within BPM.

During the third round, employees ranked it higher than both Middle and Senior Managers. This suggests that potentially managers need better establish and relay the vision of the organisation to employees. Any concerns need to be discussed openly, with the involvement of all key stakeholders as suggested by Bandara, Alibabaei, and Aghdasi (2009).

In conclusion, the findings from this research and the current position of Organisation X's status of moving towards a new process driven approach, appear to echo the thoughts of Hammer and Champy (1993) who recognised that *'strong executive leadership'* along with commitment and understanding throughout all levels of the organisation is critical when organisations face change.

5.3.3.2. Communication

Communication was ranked as the second biggest challenge within the third round of the Delphi. This may be of concern as Ruck and Welch (2012) suggest

that effective internal communication needs to be established prior to the implementation of BPM. It is clear from the varied ranked scores of the groups that Communication is not effective across the organisation. The description which accompanied the term Communication included statements such as:

'Task allocation, and expectations are often not clearly thought through or explained, leading to more than one individual believing that they are responsible for a task'.

This indicates interdependency between Communication and Accountability. If consideration is given to the group ranking scores it is seen that Employees and Middle Managers appear to be similar which suggests that the communication between direct authority lines may be ineffective (Adeyemi and Ositoye, 2010) or both. However the Senior Manager group ranked Communication as a lower concern, as shown in Figure 4. This suggests that the perception of communication between Senior Managers and the other two groups differs across the organisation. As most Employees do not directly report to a Senior Manager, Yrie, Hartman, and Galle, (2002) found that lack of face-to-face communication between management and employees can lead increase the potential for '*distortion*' within communications.

It is recognised that communication is a two-way process and what cannot be identified from *this* research is if Middle Managers and Employees are asking Senior Managers for the information. If not, this may explain why the Senior Managers prioritised Communication lower than the Middle Managers and Employees. Bandara, Alibabaei, and Aghdasi (2009) suggest in their framework that the aim of internal communication should be to form channels of information which enable two-way conversation. The result of which creates greater trust between employees and managers. Communication should therefore be considered by the Organisation as an intangible asset (Ruck and Welch, 2012).

A further factor which is unclear from the findings is what type of communication is currently occurring, as Welch (2012) insists that internal communication can only be beneficial if it is delivered in a format which is acceptable to employees, as poor communication can be just as damaging as no communication.

5.3.3.3. Value

The Value of processes was identified by Senior Managers and Employees as the third greatest barrier the organisation has in the context of BPM. However, Value was not selected by any Middle Managers. This suggests that the Middle Managers do not recognise Value as a significant challenge to the organisation. What cannot be ascertained is if the Middle Managers appreciate the Value of processes or not. If the value of each process is not part of the organisation's mind-set, then functional silos will remain and will reduce the effectiveness of BPM implementation efforts (Reijers and Mansar, 2005). In conclusion, regardless of the Middle Manager's response, the value of processes need to be discussed and aligned across all levels of the organisation as Sayer (1998, p248) highlights that BPM *'cannot be accomplished if the values of organisational members are not aligned'*.

5.3.3.4. Accountability

Throughout the first two rounds, Accountability received the highest response rates although it ranked as the fourth greatest barrier it was the only barrier to receive equal consensus across all the groups.

Senior Managers and Employees seem to have a similar perspective to Accountability being a significant barrier to BPM within the organisation. These findings support McCormack et al, (2009) who explain that governance should be present within BPM as the lack of ownership of processes can have a negative impact on BPM. However, Organisation X is not uncommon in their current status as few BPM models specify who should fulfil roles when implementing such action (Röglinger, Pöppelbuß, and Becker, 2012).

Within the description (Appendix 6) the statement of *'Having teams/Units which have overlapping processes and responsibilities make it easier to deflect or sidestep responsibilities'* confirms the importance of Kohlbacher's (2010) suggestion that a manager, or process owner, should be identified for each business process, and given end-to-end responsibility for that process.

A further statement raised during the first round of the Delphi was '*There is a general unwillingness for people to take accountability for responsibilities within the business*' and '*... a lack of accountability is given to Project Managers*'. In conclusion, Organisation X should follow Minnoe and Turner (2012) who found that having clearly defined responsibility and roles is critical to good leadership within BPM.

As outlined in Section 2.5.1, although there are benefits of having assigned responsibility and control within processes, the element of flexibility needs to be appreciated and carefully managed. There is a risk in formalising and automating systems within BPM, as the capability to handle exceptions and special cases can lead to a trade-off between formal processes and informal requirements (Pernici and Weske, 2006); therefore if the process owner has the ability and authority to make decisions (Dachler and Wilpert, 1978; Bandara, Alibabaei, and Aghdasi, 2009) then the process can be executed promptly to the benefit of the customer (Hammer and Champy, 1993; Davenport, 1993; Hammer, 2007).

Only 43% the Middle Manager group selected Accountability as a barrier. Reason for such a differing view to Senior Managers and Employees may be indicated by Sayer (1998) who reports that Middle Management can be a barrier to BPM, as they feel their power and position within the organisation is threatened, this creates resistance to change. This belief is also supported by McKersie and Walton (1991) that middle managers can be confused about their roles and their responsibilities which is a hindrance to organisations, as middle managers are '*the crossroads for change*' with Senior Management providing the direction and leadership from the top, and involvement and reporting from the employees from the bottom.

5.3.3.5. Motivation

Within the literature, Motivation is a key element to develop and maintain within an organisation (Goss, Pascale, and Athos, 1998) as stakeholder participation will be required if BPM is to be successful (Bandara, Alibabaei, and Aghdasi, 2009). This concept is present within the organisation as all sub-groups did recognise Motivation as a barrier. The context of Motivation generated by the

panellists in the first round of the Delphi was the lack of a 'can-do' culture and limited motivation of Employees leading to a lack of innovation and change. Although this does suggest a strong interdependency on the overall culture within the organisation, it is clear that there is a discrepancy between the management groups and the employees, as employees ranked it higher. This suggests a barrier within the organisation, due to the responses gathered within the first round of the Delphi indicates a lower sense of motivation within Employees compared to the management groups. Ultimately, employee participation is an important attribute that the organisation needs to develop, especially to gain buy-in with organisational decision making (Dachler and Wilpert, 1978). Decision making did feature as a barrier during earlier rounds of the Delphi as discussed in section 5.2. Thus further supports the researcher's conclusion that it was symptomatic of other barriers.

It is important for the management groups to recognise that they need to engage their employees and fully involve them in all aspects of the BPM implementation as per Gostick and Elton (as quoted in Gable, Seung, Marker, and Winiacki, 2010). The more motivated employees are, the more efficient and productive they will be (Box and Platts, 2005). The problems which can be encountered if goals of employees, managers and organisational need are not aligned as discussed in section 2.5.5.

5.3.3.6. Culture

A trend identified with Culture was seen with Senior Managers and Employees having similar perspectives after the second round of the Delphi. However during the ranking stage a varied ranking response was generated, Senior Managers ranking it two positions higher than employees with middle managers ranking it approximately in the middle.

The influence of Culture on BPM can either assist or hinder its progression within an organisation is appreciated (Tsai, 2003; Singh, Keil, and Kasi, 2009). Due to the fact that all levels identified Culture as a barrier, It is important that Organisation X establishes a culture which embraces change and has open communication where decisions are made based on information rather than attitudes. Bandara, Alibabaei, and Aghdasi (2009) suggest that this form of

culture should be seen as a predecessor for BPM as culture cannot be altered within a short time frame (Grugulis and Wilkinson, 2002).

The benefits of nurturing a positive culture can increase employee understanding and involvement towards realising business objectives (Zairi, 1997; Llewellyn and Armistead, 2000; Spanyol, 2003; Macleod and Clarke, 2009) which support the conclusions drawn from the previous barrier in section 5.3.3.5.

Nevertheless, there remains limited research which defines the optimum culture an organisation needs to cultivate in order to support a BPM approach (Schmiedel, Vom Brocke and Recker, 2013).

5.4. Analysis and Conclusions of the Research Question

Although the barriers identified from the findings are popular topics within business literature as a whole, in the context of BPM it is important to consider the interdependencies that exist. Many academic authors (Zairi, 1997; Llewellyn and Armistead, 2000; Spanyol, 2004; Macleod and Clarke, 2009; Singh, Keil, and Kasi, 2009; Macleod and Clarke, 2010) support the conclusion that without effective communication Organisation X cannot expect efficient leadership or a co-operative culture to develop. It is further demonstrated within the literature discussed in Chapter 2, that barriers identified in earlier rounds, such as training, decision making, and strategic alignment are important to BPM, thus the top six barriers should not be viewed in isolation.

Therefore, although this research has identified some perceived barriers within Organisation X to focus on, consideration should be given to all twenty-five barriers identified and the context/descriptions which were provided by the participants.

In considering all the barriers that are perceived to be present within Organisation X it provides the opportunity to consider a wider context other than just barriers associated with implementing BPM.

As discussed in section 2.5, some of the fundamental prerequisites of BPM such as those suggested by Rosemann and vom Brocke (2010), may need to be considered in addition to those highlighted within this research. An example

of which, acknowledged within section 5.3.2, is that of strategic alignment of Organisation X's business objectives and the processes which the organisation performs, need to align, as without one the other will be restricted in its success.

5.5. Overall Conclusions

The conclusions of the research question have been detailed within section 5.3. The main points from these conclusions are summarised below.

- In order to remain relevant and have practical implementation within Organisation X, BPM must not only describe the process, but explain how information flows through the process (Gambrill, 2006; Davis, 2012) to ensure organisational goals are met and competitive advantage is gained (Singh, 2012).
- For BPM to be successful, Organisation X must migrate from a traditional functional, siloed based environment to one which is process driven (Fisher, 2004).
- Within this research twenty-five different barriers were identified, six of which were deemed to have the greatest impact on BPM within Organisation X. The barriers were ranked as follows:
 1. Leadership
 2. Communication
 3. Value
 4. Accountability
 5. Motivation
 6. Culture
- The list of barriers identified within the research present Organisation X with a starting point in which to focus its initial efforts of introducing BPM. However, it is important to consider the interdependencies that exist between barriers and the context descriptions provided by the participants. Therefore, the top six barriers should not be viewed in isolation.

- Recommendations have been presented in Chapter 6 to assist Organisation X in its next actions.

5.6. Limitations of the Research

The research presented is subject to a number of limitations. Primarily, due to a case study approach being taken meant that the findings are limited to the organisation concerned, at a given point in time and was not validated within another environment, as such the findings cannot be generalised. Upon reflection, the researcher may have used a second method to validate the findings within the context of the organisation.

A further limitation of the research concerns the reliability of the findings ascertained from using the Delphi method. Although the method could be reproduced, the findings are not guaranteed to be reproducible, as a different set of participants may generate different results based on their knowledge and experiences. However this was a recognised limitation of the method as discussed in section 3.4.2 prior to implementation.

5.7. Opportunities for Further Research

Concerning the barriers identified within this research, a more detailed investigation could be carried out to ascertain what aspects of each barrier reduce the effectiveness of BPM.

Although this research reached consensus with six important factors which can act as barriers to BPM within a serviced based organisation, a future research opportunity may be to validate the findings within a wider range of organisational types. Also comparisons between the impact of the identified barriers within public and private based organisations could also be explored.

Due to the focus of the research being based on barriers of BPM which can convey negative connotations, the research did not allow the participants to express their opinions regarding what nurturing factors are present within the organisation, which actually improve BPM, therefore this is a potential opportunity for future research.

6. Recommendations

6.1. Introduction

Having identified perceived barriers within Organisation X, this chapter will outline recommendations based upon the findings, analysis and conclusions drawn from the research.

6.2. Implementation Plan

The researcher recommends a small focus group consisting of stakeholders from Senior Management, Middle Management and Employees be formed and receive management support in order to be successful (Willmott, 1995; Gambrill, 2006; Bandara, Indulska, Chong, and Sadiq, 2007; Kohlbacher, 2010).

The objective of the focus group should be to review the barriers along with the descriptions and identify what aspects need to be addressed with priority being given to Leadership, Communication and the Value of processes as outlined in sections 5.3.2, 5.3.3.1, 5.3.3.2, 5.3.3.3 and 5.4. The focus group should then formulate appropriate actions aligned with the strategic objectives established by the Senior Management as outlined in sections 2.5.6 and 5.3.2. These actions then need to be assigned to an individual so that responsibility is held as discussed in sections 2.5.1, 5.3.3.1; and 5.3.3.4.

Regular status updates should be given during manager and unit meetings to ensure open communication and awareness across the organisation as suggested by Yrie, Hartman, and Galle (2002).

For the reasons outlined in section 2.4, as an on-going measure it is suggested that a BPM maturity model be identified, such as Hammer's (2007) Process and Enterprise Maturity Model (PEMM) or Rosemann and DeBruin's (2005) Business Process Management Maturity Model (BPMMM), to assess the current status of BPM maturity within Organisation X (Röglinger, Pöppelbuß, and Becker, 2012). This would provide the organisation with a structured and formal way of capturing strong and weak areas and guide improvements which may increase overall efficiency (Neubauer, 2009) and long term competitive advantage of Organisation X (Hung, 2006; Singh, 2012).

7. Bibliography

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8. Appendices

8.1. Appendix 1: Invitation for Research Participation

From: Artell, Victoria
Sent: [DATE]
To: [PARTICIPANT EMAIL]
Subject: Research Participation: Round One

Dear [PARTICIPANT NAME]

As part of my MBA I am undertaking some research which will formulate the basis for my dissertation. My research topic is concerned with Business Process Management (BPM) within our company.

A business processes can be defined by Michael Hammer (2001, p 1) as:

‘an organised group of related activities that together create customer value. The focus in a process is not on individual units of work, which by themselves accomplish nothing for a customer, but rather on an entire group of activities that, when effectively brought together, create a result that customers value.’

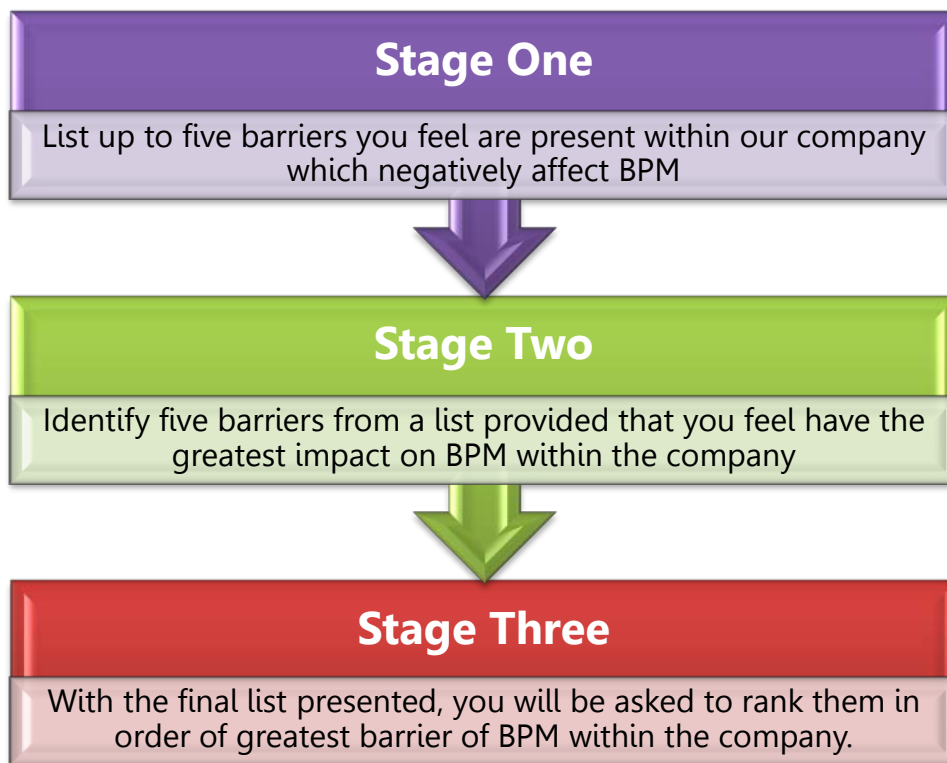
Hammer, M., (2001) The Process Enterprise: An Executive Perspective. Accessible from: www.hammerandco.com/pdf/Process-Enterprise-exec.pdf

Within the context of this research, a barrier is deemed as anything which prevents, reduces or stops processes within the organisational environment.

The objectives of my research are:

- i. To understand contemporary literature on business process management and the factors which can affect its success.
- ii. To identify the perceived barriers associated with Business Process Management within Organisation X.
- iii. Prioritise the barriers in order of greatest (to smallest) to identify the main factor(s) which may affect the realisation of business process management within Organisation X.

I would be very grateful if you would agree to participate in my research. There will be a series of steps I would like you to complete as outlined below.



All responses will be treated as confidential. I will not disclose or in any other way indicate to others your answers. I will make every effort to remove any identifying information from your answers (i.e. examples of unit specific processes).

I would be very grateful if you would agree to participate in my research however you are under no obligation to participate. If you are unable to complete all three rounds then please let me know.

If you have any questions or comments please contact me to discuss.

I would appreciate your responses on the attached table no later than [ENTER DATE] please.

Thank you for your time.

Kindest Regards,

Victoria

8.2. Appendix 2: Delphi Method Round One Question

Example:

Barrier	Description
Ownership	It is unclear what processes belong to whom. It is also difficult to understand who should be carrying out what tasks within the unit.

Please fill in the following table with five barriers you believe are present which prevents, reduces or stops effective BPM within the company.

Barrier	Description

8.4. Appendix 3: Delphi Method Round Two Selection

From: Artell, Victoria
Sent: [DATE]
To: [PARTICIPANT EMAIL]
Subject: Research Participation: Round Two

Hello [Participant Name],

Thank you very much for taking part in the first round of my research.

I have merged all the results collected from the first round which have produced the attached list of twenty-five barriers. Please can you have a review the list and select 5 barriers which you believe have the most significant effect on our business process management within the organisation.

The aim of this round is to try to gain consensus as to the potential barriers within [COMPANY NAME].

I would be grateful if you can email your responses on the attached table no later than [ENTER DATE] please.

Many Thanks,

Victoria

8.5. Appendix 4: Barriers Presented During the Second Round

Barrier	Description	Select
Accountability	Having teams/Units which have overlapping processes and responsibilities makes it easier to deflect or sidestep responsibilities which leads to a lack of clarity on who has ownership for a particular task or project. There is a general unwillingness for people to take accountability for responsibilities within the business. In contrast there is also a belief that a lack of accountability is given to Project Managers. Often there isn't a Project Manager assigned or if so it is not communicated out to the wider company, therefore making management of process difficult	
Budgetary	The company has a tendency to be cost prohibitive when it comes to purchasing software/hardware which may benefit the overall process. The value of the purchase is not fully understood or appreciated.	
Business Complexity	Not all business processes can be mapped – some workflows are too complex or are reactive this means that business processes are poorly defined, some too vague, some too detailed	
Buy-In	If the process and its purpose are not clearly defined, effective team buy-in is reduced leading to process implementation being less effective. Employees appreciate freedom in how they do their work and are not keen to adopt processes designed by others.	
Change Management	Functional process leaders must understand and accept the need for business process change, to aid facilitation of change at the lower level. However the change must be beneficial to the business or unit.	
Communication	Task allocation and expectations are often not clearly thought through or explained, leading to more than one individual believing that they are responsible for a task. Communication of established processes is often minimal with no formalised channels. Task follow-up maybe allocated to another individual, not connected to the first process. Managers responsible for the Employees allocated the task maybe unaware of the task' purpose or existence. They don't understand the worth of what they are doing or why they are doing it, so cannot take pride in it or perform it effectively.	

Culture	The culture of the business is more like a start-up/small business where business processes are more organic and informal. The organisation is quite disparate in terms of people getting on with things in their own way as opposed to following a structured process. We have a culture where individuals sit in their box and do not consider implications of their activities across the wider business. There is a silo mentality with managers who are sometimes loathed to commit resource. There is a culture of 'no change' and this restricts successful implementation of process change.	
Decision making	Employees unable to make the decisions required in order for successful process management, micro management by Senior Managers	
Discipline	Lots of processes established but not maintained over a medium / long term	
Equipment	Replacing expensive ageing and unreliable equipment.	
Geography	Geographical distance and psychological distance (feelings of isolation) between Employees and Manager	
Inconsistency across the Business	Any process needs to be consistently implemented which requires oversight and ownership by management. Level of process orientations and common method for Value Stream Mapping (VSM)/Business Process Management (BPM) varies across units.	
Knowledge	Lack of industry knowledge and an understanding of client needs. Failure to invest in people with the correct skills/knowledge required for the role	
Leadership	This must be assigned at the start of the process and maintained through to completion. The leadership must be complete, and not undertaken on a 'part time' basis, as focus is lost. Often no one assumes leadership over a project, which leads to indecision and delays. Completion of the task needs to be communicated to company members affected, together with the success or failure, with the accompanying reasons.	
Legacy Data Issues	Legacy processes (not always generated within the organisation) based on past requirements or datasets haven't been reviewed and therefore are still being carried out.	
Morale	Low morale in the workplace at present does not permit to effective process development. Examples include there being limited room for progression, or fully utilising the skills and abilities that Employees have.	

Motivation	We don't appear to have a "can do" culture, there are pockets where this is not the case however it's a barrier to ideas and change. Not investing in Employees and retaining/motivating the best of your Employees	
Politics	Politics that are present within the organisation and the negativity that it brings. Examples include the software which is allowed to be used and working inter op-co.	
Process Design	Within the organisation there is a tendency to deviate from current business processes when the need arises or it's perceived to be getting in the way. The manual methods we use to capture data and output information leads to a huge loss of man-time.	
Reporting and measurement	Lack of measurement and performance reporting undermines the ability to manage the consistent implementation of the process	
Resource Management	Employees members required to adhere to the unit's process are not assigned full time to the unit. Lack of interchange of resource, where a project requires a large amount of resource in a small amount of time, it is often seen to use temporary labor which requires training, rather than using under utilised permanent Employees. Resource allocation should be implemented to improve the usage of Employees	
Strategy	The organisation is not as clear as it needs to be in defining a sales strategy that will provide maximum return.	
Training	Training is more difficult to coordinate and implement across different geographies. Poor process training produces poor results; Employees need to be trained to the correct level for the process. Some of the skills required have a long lead time to becoming fully competent. When projects come in we sometimes have to use Employees that do not have the experience which incurs extra QC costs.	
Value	The value of good business processes are not recognised. Employees don't understand/ not aware of the worth of what they are doing or why they are doing it, so cannot take pride in it or perform it effectively.	
Work Load	The allocation of projects (or customers) within the unit means that certain individuals could be dealing with more work than others	

8.6. Appendix 5: Delphi Method Round Three Ranking

From: Artell, Victoria
Sent: [DATE]
To: [PARTICIPANT EMAIL]
Subject: Research Participation: Round Three

Hello [PARTICIPANT NAME],

Thank you for taking part in my research so far. This is the last round which I need your input for.

Over the last two rounds you have generated a list of potential barriers you see across the business and have identified those which have the largest impact on the processes performed day to day.

Attached are the 6 main items which were chosen by more than 50% of you. Please can I ask you to rank them from 1 through 6, 1 being the greatest barrier you think the business faces in improving its business process management and 6 being the least.

I would be grateful if you can email your responses on the attached table no later than [ENTER DATE] please.

Thank you again for your participation.

Kindest Regards,

Victoria

8.7. Appendix 6: Refined List of Barriers Presented During Round Three

Barrier	Description	Order of Priority
Accountability	Having teams/Units which have overlapping processes and responsibilities makes it easier to deflect or sidestep responsibilities which leads to a lack of clarity on who has ownership for a particular task or project. There is a general unwillingness for people to take accountability for responsibilities within the business. In contrast there is also a belief that a lack of accountability is given to Project Managers. Often there isn't a Project Manager assigned or if so it is not communicated out to the wider company, therefore making management of process difficult.	
Communication	Task allocation and expectations are often not clearly thought through or explained, leading to more than one individual believing that they are responsible for a task. Communication of established processes is often minimal with no formalised channels. Task follow-up maybe allocated to another individual, not connected to the first process. Managers responsible for the Employees allocated the task maybe unaware of the task' purpose or existence. They don't understand the worth of what they are doing or why they are doing it, so cannot take pride in it or perform it effectively.	
Culture	The culture of the business is more like a start-up/small business where business processes are more organic and informal. The organisation is quite disparate in terms of people getting on with things in their own way as opposed to following a structured process. We have a culture where individuals sit in their box and do not consider implications of their activities across the wider business. There is a silo mentality with managers who are sometimes loathed to commit resource. There is a culture of 'no change' and this restricts successful implementation of process change.	
Leadership	This must be assigned at the start of the process and maintained through to completion. The leadership must be complete, and not undertaken on a 'part time' basis, as focus is lost. Often no one assumes leadership over a project, which leads to indecision and delays. Completion of the task needs to be communicated to company members affected, together with the success or failure, with the accompanying reasons.	
Motivation	We don't appear to have a "can do" attitude, there are pockets where this is not the case. Not investing in Employees and retaining/motivating the best of your Employees. There is little room to fully utilise the skills and abilities that Employees have across the business.	
Value	The value of good business processes are not recognised. Employees don't understand/ not aware of the worth of what they are doing or why they are doing it, so cannot take pride in it or perform it effectively.	